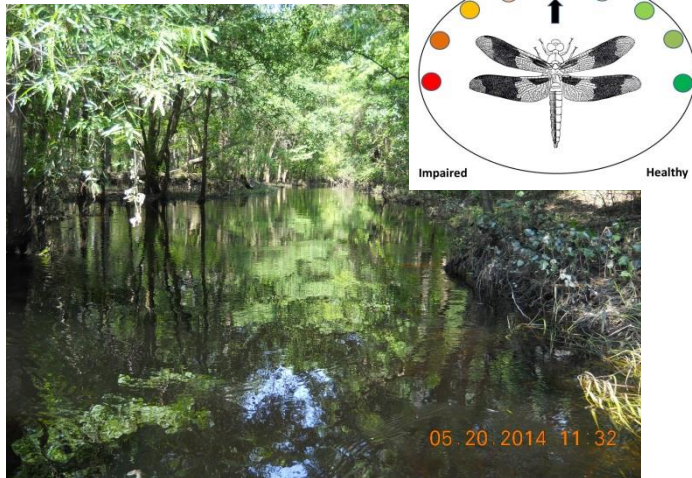


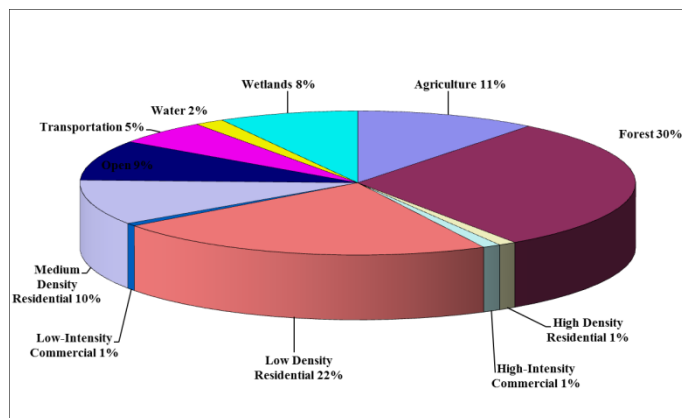
## Waterbody: Unnamed Stream at Chaires Crossroad



## Basin: Lake Lafayette

The Unnamed Stream at Chaires Crossroad is a highly altered stream/ditch draining Alford Arm and Lower Lake Lafayette and is located in eastern Leon County.

As shown in the following pie chart, approximately 51% of land use in the 32,021 acre watershed is agricultural, residential, commercial, or transportation.



### Background

Healthy, well-balanced stream communities may be maintained with some level of human activity, but excessive human disturbance may result in

waterbody degradation. Human stressors may include increased inputs of nutrients, sediments, and/or other contaminants from watershed runoff, adverse hydrologic alterations, undesirable removal of habitat or riparian buffer vegetation, and introduction of exotic plants and animals. Water quality standards are designed to protect designated uses of the waters of the state (e.g., recreation, aquatic life, fish consumption), and exceedances of these standards are associated with interference of the designated use.

### Methods

Surface water samples were collected to determine the health of the Chaires Crossroad stream and meet the requirements of the Florida Department of Environmental Protection (FDEP).

### Results

#### Nutrients

According to FDEP requirements, Numeric Nutrient Criteria (NNC) (expressed as an annual geometric mean) cannot be exceeded more than once in a three year period. Due to low water conditions, four temporally independent samples per year has only been achieved once (2009) during the period of record (2007-2014). Even though staff was not able to collect the required amount of samples in 2014, the geometric mean of the two samples collected showed that both total phosphorus (0.02 mg/L) and total nitrogen (0.3 mg/L) would have met the NNC.

#### Dissolved Oxygen

As Figure 1 shows, the unnamed creek seldom met the Class III criteria for dissolved oxygen. This is not surprising since low gradient, low flow streams often have low dissolved oxygen levels.

#### Other Parameters

Other water quality parameters appear to be normal for the area and no impairments were noted.

## **Conclusions**

Even though staff was not able to collect the required amount of samples in 2014, the geometric mean of the two samples collected showed that both total phosphorus and total nitrogen would have met the NNC. Dissolved oxygen levels seldom met the Class III criteria. This is not surprising since low gradient, low flow streams often have low dissolved oxygen levels.

Thank you for your interest in maintaining the quality of Leon County's water resources. Please feel free to contact us if you have any questions.

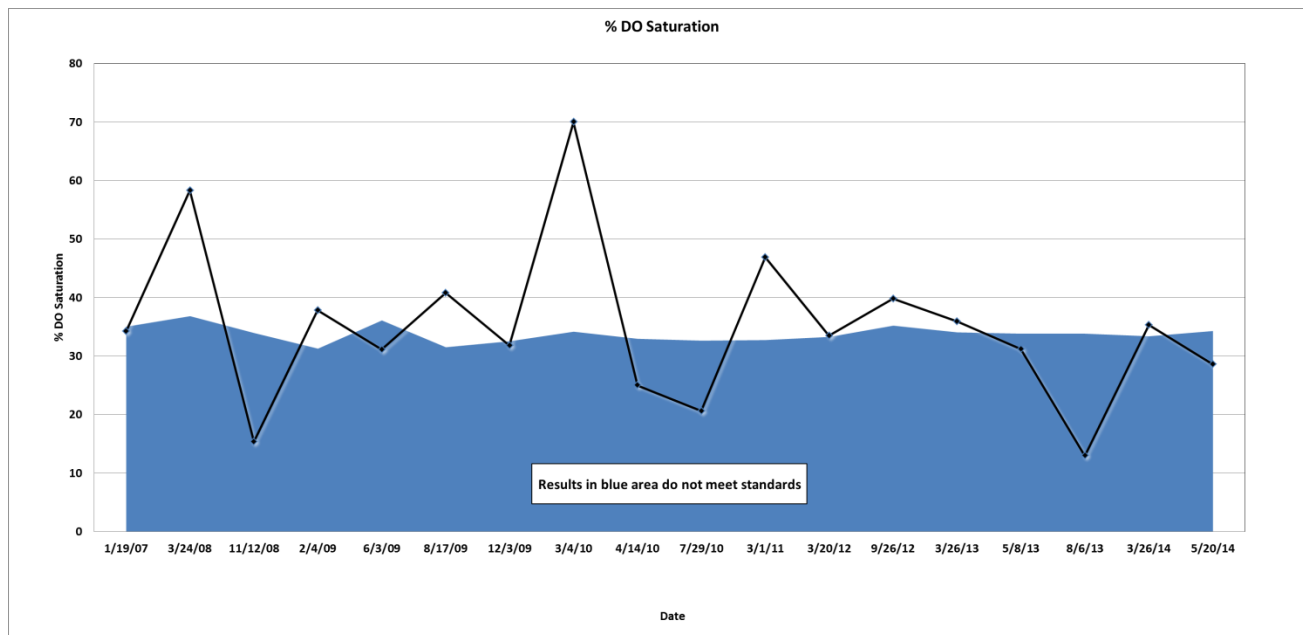
## **Contact and resources for more information**

[www.LeonCountyFL.gov/WaterResources](http://www.LeonCountyFL.gov/WaterResources)

[Click here to access the results for all water quality stations sampled in 2014.](#)

[Click here for map of watershed – Sample site 57.](#)

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**Figure 1.** Dissolved Oxygen Percent Saturation results for Unnamed Stream at Chaires Crossroad.